

DVR
Digital Video Recorder

USER MANUAL



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Safety Instruction

1. Read Instruction

All the safety and operating instruction should be read before the equipment is operated.

2. Power sources

This equipment should be operated only from the type of power source indicated on the marking label. If you are not sure of the type of power, please consult your equipment dealer.

3. Objects and Liquid

Never push objects of any kind through openings of this equipment and / or spill liquid of any kind on the equipment as they may touch dangerous voltage points or short out parts that could result in a fire or electric shock.

4. Water and / or Moisture

Do not use this equipment near water or in contact with water.

5. Heat sources

Do not install near any heat sources such as radiators, heat registers, stoves or other apparatus (including amplifier) that produce heat.

6. Dusty field

Never use this equipment near dusty or intense magnetic field.

7. Cleaning

Unplug this equipment from the wall outlet before cleaning it. Do not use liquid aerosol cleaners. Use a damp soft cloth for cleaning.

8. Lightning

Unplug this equipment during lightning storm or when unused for long periods of time.

9. Accessories

Do not place this equipment on an unstable cart, stand or table. When a cart is used, use caution when moving the cart / apparatus combination to avoid injury from tip-over.

10. Moving

Disconnect the power before moving the equipment. And the equipment should be moved with care.

11. Attachment

Never add any attachments and/or equipment without the approval of the manufacturer as such additions may result in the risk of fire, electric shock and other personal injury.

12. Correct Batteries

Risk of explosion occurs if battery is replaced by an incorrect type. Therefore you must use the same type of battery as the one being used in the product.

13. Ventilation.

Do not block any ventilation openings, installation of the equipment in the rack should be such that the amount of airflow required for safe operation of the equipment is not compromised.

14. Overloading

Do not overload wall outlets and extension cords to avoid the risk of fire or electric shock.

15. Reliable Earthlings (Grounding)

Reliable grounding of rack mounted equipment should be maintained. Particular attention should be given to supply connections other than direct connections to the branch circuit.

Chapter 1 Features

Function	Brief and Description
Real time monitoring	Double video output; with monitor, VGA virtual output port or HDMI Output; Support net-viewer and MP live surveillance and sequence function.
Record	H.264 video compression format; record quality/resolution/frame rate adjustable, multiple record modes (Always, Scheduled, Manual, Alarm, Motion detection and remote record)
Record storage	Support SATA large capacity HDD and save real-time record image to HDD.
Playback	Support DVR single CH and multiple CH Search/Playback of recorded files.
Backup	Support DVR backup via USB flash drive, removable drive, Recorder and network.
Alarm Setting	Supports HDD & video input alarm management and external alarm signal inputs.
Network operation	Supports remote surveillance by authority users to increase system security.
Mouse Operation	Supports Mouse operation for faster menu navigation.
PTZ Control	Supports PTZ camera operations through RS-485.

List 1-1

Features:

- ☞ H. 264 video compression format; supports D1 resolution;
- ☞ 8kHz*16bit G.711A audio compression format
- ☞ Windows Graphical interface; embedded real-time Linux2.6 operation system.
- ☞ Friendly Menu reminder;
- ☞ Multiple operation modes (Preview, record, playback, backup, network surveillance and mobile phone monitoring)
- ☞ Supports Double Encode bit network transmission
- ☞ Supports remote live surveillance via 3G mobile networks
- ☞ Supports sequence function
- ☞ The video package time is adjustable
- ☞ Multiple alarm record modes
- ☞ Rear USB2.0 ports for back-up, update and mouse operation.
- ☞ With IR remote control operation
- ☞ Multiple language OSD
- ☞ Supports auto maintenance

Chapter 2: Overview

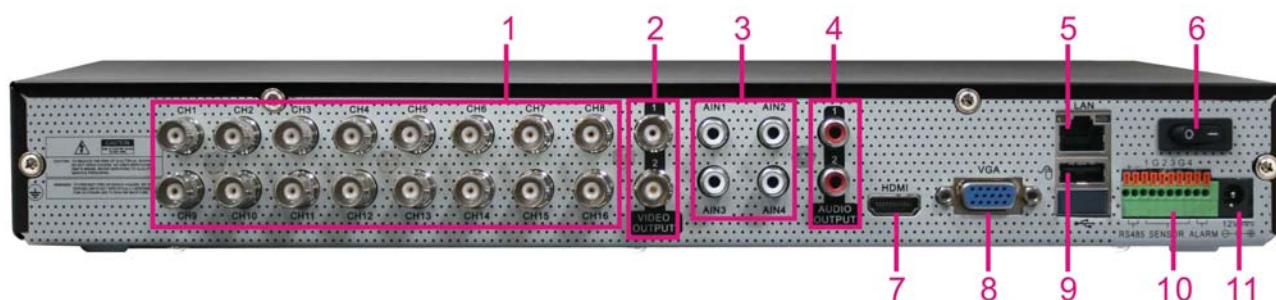
2.1 16-CH DVR Front Panel



Item	Type	Key title /Indicator	Marks	Function
1	Indicator	HDD indicator	HDD	When the “Red” indicator flashes it means the hard drive is being read or written to.
2		Power indicator	PWR	If the “Green” indicator is on the system is getting power normally.
3	IR Receiver		●	Receives IR signal from Remote Control
4	Complex Key	Menu	MENU/ESC	Enter into main menu / Exit
5		PTZ	PTZ	Enter into PTZ control, select [Enter] / [Edit] operation
6	Direction Key	UP	▲	Move up
7		DOWN	▼	Move down
8		LEFT	◀ / ◀◀	Move left / RWD
9		RIGHT	▶ / ▶▶	Move right / FWD
10	Channel Select & numeric input	Single Channel and numeric key	Numeric key 0,1-9 and CH key CH1~9	1. Number 1~9 stand for numeric 1~9 and CH 1~9. 2. CH11-CH16 select method: press firstly numeric key 1 and then other numeric key. For example CH16 select firstly press 1, and then press 6. 3. Holding press key 0 for three seconds may convert current output device
11	Rec.	Manual record	●	Press the button to start manual record.
12	Play Control	Pause	■	Stop playing
13		By frame	▶	Play frame by frame
14		Play	▶	Convert to play status
15		Mute	🔇	Open or close audio input
16		Multi Display	🖼️	Live display Quad mode, 9-split and 16-split mode
17		USB Port		Connect to USB2.0 port

List 2-1

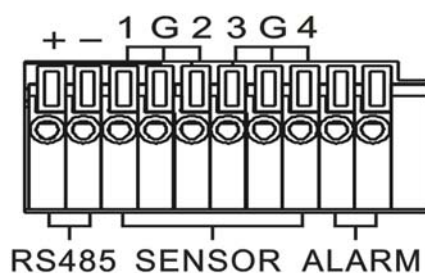
2.2 16-CH DVR Rear Panel



Item	Physical port	Connection method
1	Video input	Connect CH1-16 (Virtual) video input (BNC interface)
2	Video output	Connect monitor output(BNC interface)
3	Audio input	Connect CH1-4 audio signal input (BNC interface)
4	Audio output	2CH output; BNC (interface)
5	Ethernet: Port	Connect LAN, Ethernet (RJ45 interface)
6	Power Switch	Turn Power on and off
7	HDMI	HDMI Output
8	VGA Port	Connect to VGA monitor, such as PC monitor
9	USB Port	Connect USB mouse
10	RS-485/Sensor/Alarm	RS485/Sensor/Alarm interface (see pin outs below)
11	Power Port	Connect power supply - DC12V 5A

List 2-2

RS485/Sensor/Alarm port functions:



Alarm input: Connect [-] port of your sensor to G (GND) pin, and [+] port to channel input according to the alarm device you purchased.

Alarm output: Connect to the two ports marked with "out"

PTZ Port: Connect your camera to RS-485A and RS485B accordingly.



2.3 Remote Controller



Key Title	Key Function
REC	Press the button to enter into manual record.
SEARCH	Press the button to enter into record search menu
2×2	Enter into Quad display
3×3	Enter into 9-split display
4×4	Enter into 16-split display
AUTO	Enter into dwell time display
0~9	Channel select; numeric key
DISPLAY MODE	Multiple CH display (Quad, 9-split, 16-split and full screen display)
▲	Up direction key
▼	Down direction key
◀ / ▶	Left/right direction key; also decrease/increase parameter value of control bar.
ENTER	select [Enter] / [Edit] operation
Menu/ESC	Enter into/exit Main menu
PIP	PIP display mode
MUTE	Mute key
FWD	Forward (x2、x4、x8)
REW	Rewind (x2、x4、x8)
PLAY	Enter into record search, play record event
STOP	Stop play / manual play
PAUSE/FRAME	Pause / play frame by frame
SLOW	(1/2、1/4、1/8) Slow play
Z+	Zoom out video area
Z-	Zoom in video area
F+	Extend focus
F-	Extend focus
I+	Increase PTZ brightness
I-	Decrease PTZ brightness
PTZ	Allow you set preset bit and control PTZ.
LOCK	Lock system

List 2-3

Except using buttons of front panel or remote controller, you also can use mouse to perform system operation.

TYPE	Function
Click left key of Mouse	In menu lock mode, Enter into pop-up menu and clicking any sub menu to pop up Log-in window; on menu unlock mode, enter into pop-up menu, and then clicking left key to enter into any sub menu directly.
	After entering into main menu, clicking left key could enter into any sub menu; On [Detailed file] menu mode, clicking left key could playback one recording file.
	Change the status of check box and motion detection area.
	Clicking combo box to access pull-down menu; Click left key to stop dwell time display when dwell time display is activated.
	By clicking left key you can adjust Color control bar and volume control bar.
	Clicking combo box to access pull-down menu
	By clicking left key you can select values in edit boxes or pull-down menu and supports Chinese word input, special symbol, numeric and character input, use instead of [Enter- ] or [Backspace ]
Click right key of Mouse	In live display mode, clicking right key will display pop-up menu (shown as Picture 5-1).
	In Main menu or sub menu mode, clicking right key will exit current menu.
Double-click Left key of Mouse	In live display or playback mode, double-clicking left key will maximize the screen.
Moving Mouse	Select menu item
Sliding Mouse	On motion mode, sliding mouse will select motion area; On [Color set] menu mode, sliding mouse will adjust color control bar and volume control bar.

List 2-4

Chapter 3 DVR INSTALLATION

3.1 HDD Installation

Caution : Please do not Install or take out hard drive when DVR is running!

(1) The model has a HDD drawer. Please use provided key to take out the HDD drawer and put HDD into the drawer correctly.

(2) Remove screws and open DVR upper cover carefully;

(3) Insert Power Cord and data cable into Pin of hard drive securely;

(4) Put the upper cover back carefully, re-attach screws.

3.2 Camera and Monitor Connection

Connect camera cable to video input of DVR, and from video output of DVR to Monitor via BNC connector (Refer to section 2.2-Rear Panel); or

If the camera is a PTZ speed dome, you could connect RS485 A & B to the according port of DVR respectively (refer to system figuration on Chapter 8).

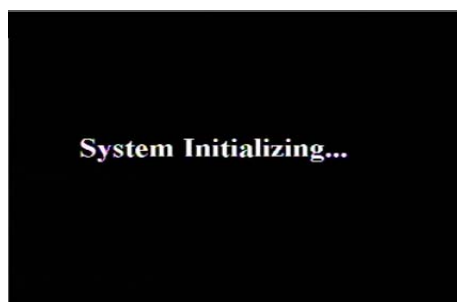
3.3 Power Supply connection

Please only use the power adapter supplied with the DVR.

After power on please make sure the video I/O connection well, audio device with RCA cable.

Chapter 4: DVR Boot up

4.1 System Initialization



Picture 4-1

After connecting the Power cable of DVR to wall outlet and pressing the Power button on the front panel, you will enter into the system initializing screen shown as Picture 4-1

4.2 Live screen



Picture 4-2

After finishing initialization the system will enter into Live screen. Picture 4-2 is the 16-split display defaulted by system, which is showing no video input status. Once there are video inputs, the screen will display live images from the cameras. In Live mode, if you use the mouse to double-click the live image of any channel, the image will be maximized to full screen, by double-clicking again, image will be come back to 16-split display mode; clicking the right button of the mouse will enter into Pop-up Menu; clicking the left button of the mouse allows you select menu items; and clicking any area outside the menu allows you exit the Pop-up menu.

Note: When internal HDD is not connected or an error occurs, the character “H” will appear on the first channel of the live screen and accompany buzzer alarm. If you want to close the buzzer alarm, please enter into [Device manage→Alarm setting] to set HDD loss, HDD space not enough and alarm output to “off”.

Chapter 5: DVR Menu

5.1 Pop-up Menu

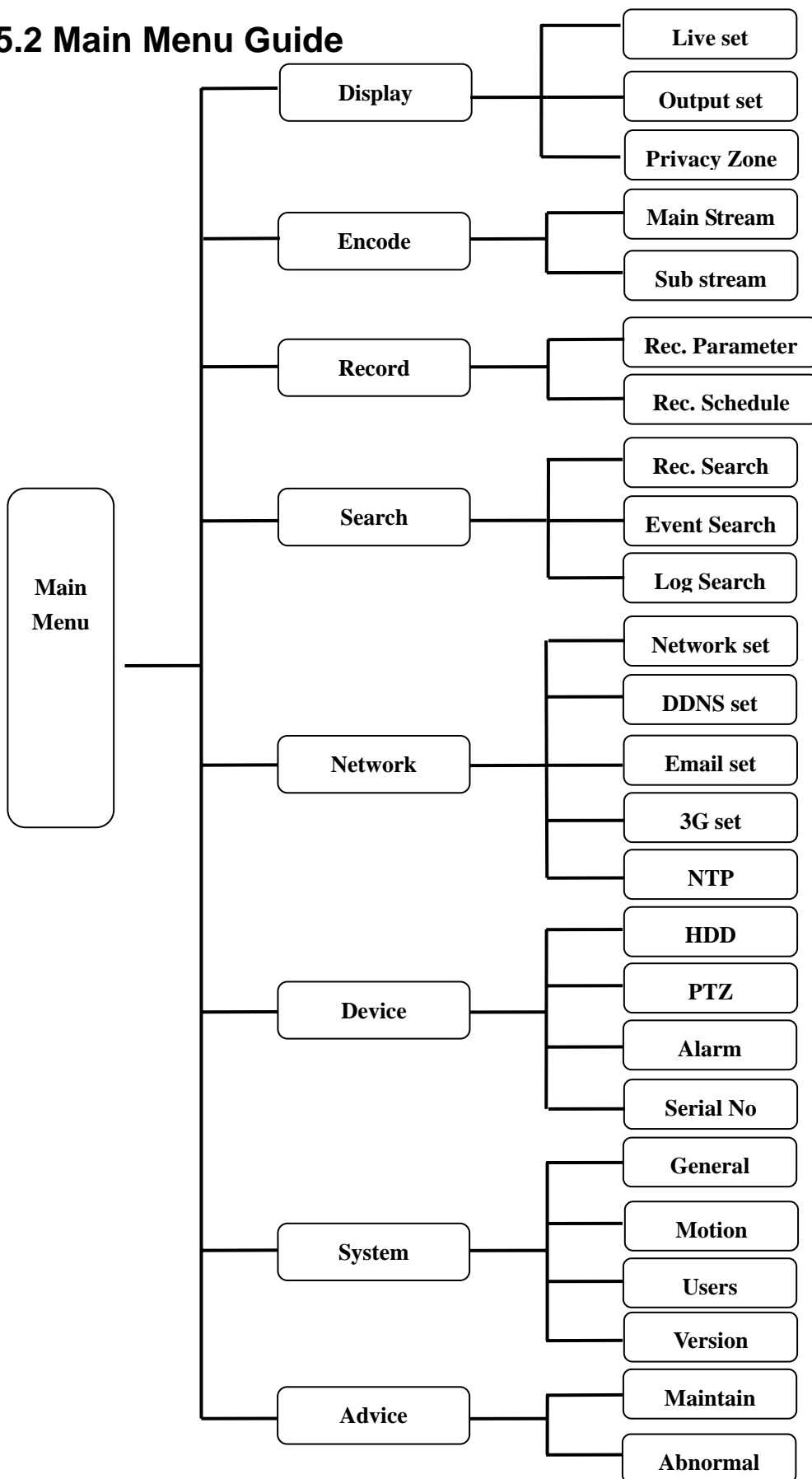


Picture 5-1

After finishing system initialization, click right key of mouse on main interface mode to enter into Pop-up Menu. Now you could perform parameter setting and operate on Main Menu, Multi-Pics, PTZ, PIP, Rec. Search, Mute, Manual record, Start Rolling, Start Cruise and Vo Switch etc.

Note: options of the Pop-up menu will differ depending on different parameter setting and application environment.

5.2 Main Menu Guide



Picture 5-1

5.3 Main Menu

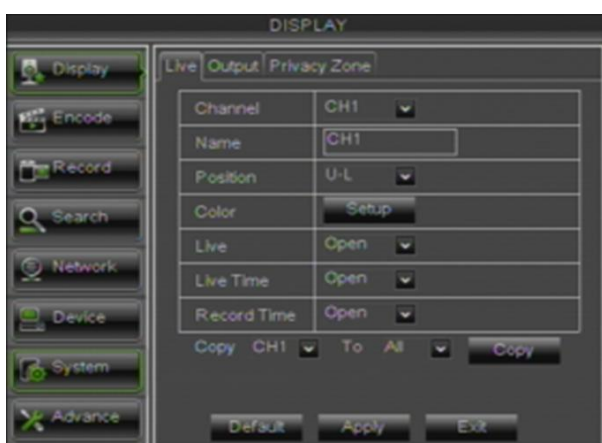


Picture 5-2

On preview mode, click [Menu] button on the front panel or Remote controller to enter into Main menu interface shown as Picture 5-2. And also you can click [Menu] icon to enter the main menu screen. In Main Menu mode, you can control device management settings, such as Display, Record, Network, Search, Device and System setting etc.

5.3.1 Display mode

5.3.1.1 Live mode



Picture 5-3



Picture 5-4

Above picture 5-4 is the Color Menu where you can adjust image brightness, saturation, contrast and hue parameters of each channel.

Explanation:

- 1、The modifications will be available after clicking [APPLY] button on the bottom of the sub-menu windows and being prompted to save and then clicking [ok] button.

- **Channel:** allow you setup the channel you desired.
- **Name:** allow you setup the channel name, and system support up to eight characters or four Chinese characters.
- **Position:** allow you setup the display position of each channel.
- **Color:** Click [Setup] option to enter into the [Color setup] interface shown as Picture 5-4.
- **Live:** allow you enable [Live] surveillance function
- **Live time:** allow you enable [Live time] appear in the preview screen.
- **Record time:** When set to “Enable”, you are allowed to record system time into the record history.
- **Copy:** allow you copy all data of one channel to any other one

- 2、If you want to cancel the modification, click [Exit] button to exit the menu.
- 3、When clicking [DEFAULT] button, all system default values will be reset to default value.
- 4、System default value indicates the value pre-set at the factory.

5.3.1.2 Output mode

Go to [Main menu→Display→Output] to enter into the output set interface shown as Picture 5-5.

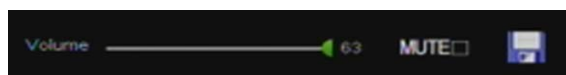


Picture 5-5

- **VGA/HDMI Resolution:** allow you select VGA or HDMI output, including 800x600, 1024x768, 1280x1024, 1440x900 and HDMI.
- **Transparency:** allow you adjust menu's transparency, and its range is 1~128.
- **Margin:** allow you adjust the whole screen's margin. Details operations please refer to the Picture 5-6.
- **Volume:** allow you adjust the DVR volume shown as Picture 5-7.



Picture 5-6

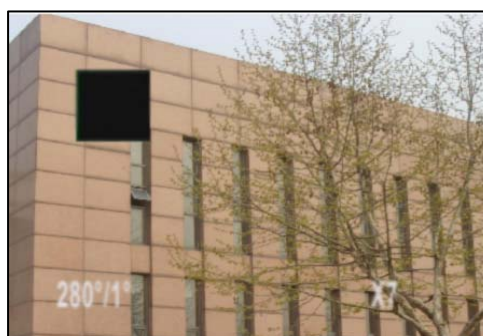


Picture 5-7

5.3.1.3 Privacy Zone



Picture 5-8



Picture 5-9

The function Allow you setup privacy zone parameters according to Picture 5-8. Each channel could set one privacy zone, and please follow below steps to set:

1. Select one area
2. Click [Setup] to adjust position of mask area
3. After finishing position adjust, click right key of mouse to return back [Privacy zone] interface
4. Click [Apply] to save the above setting.

5.3.2 Encode

5.3.2.1 Main Stream set

Go to [Main menu→Encode→Main Stream] to enter into the interface shown as Picture 5-10.



Picture 5-10

- **Resolution:** support CIF.
- **Frame rate:** PAL: 1-25 f/s ; NTSC: 1-30 f/s.
- **Bit rate:** user could select the relative value by pull-down menu.
- **Audio:** When tick-selecting the option, system will record video stream with audio simultaneously

5.3.2.2 Sub stream set

Go to [Main menu→Encode→Sub Stream] to enter into the interface shown as Picture 5-11.



Picture 5-11

- **Audio:** When tick-selecting the option, system will record video stream with audio simultaneously.

- **Video:** allow you open or close the sub stream output. If you select “Enable” system will select sub-stream preview and guarantee image quality once network is unstable.
- **Frame rate:** allow you set net transmittal frame rate. User could select the relative value by pull-down menu.
- **Bit rate:** allow you set net transmittal bit rate. User could select the relative value by pull-down menu.

5.3.3 Record Set

5.3.3.1 Record Parameter



Picture 5-12

Click [Main Menu→Record→Rec Para] to enter into the interface shown as Picture 5-12 and perform record parameter set for each channel, including Channel name, record Enable or Disable, File size, Mode and Pre-record function.

5.3.3.2 Schedule

Click [Main Menu→Record→Schedule] to enter into the interface shown as Picture 5-13



Picture 5-13

After you complete the schedule you activate it by clicking the [Apply] button.

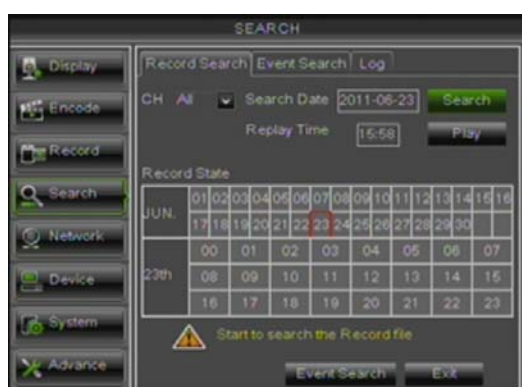
You can also click on the Default button to use the system defaults.

Explanation: Under the recording Set menu and recording search menu, original color stands for no record, “Red” stands for alarm record and “Green” stands for normal record.

5.3.4 Search Set

5.3.4.1 Record Search

Click [Main Menu→Search→Record Search] to enter into the interface shown as Picture 5-14.



Picture 5-14

- **Channel:** allows you select the channel(s) you desire to search.
- **Date Search:** In the Video Search screen, user can search for all the recordings in a specific date. To execute a video search, highlight and select the date numeric field, and then click a detailed time quantum of the specific date, system will start the playback from the first recoding of the time quantum.

- **Time Search:** In the Video Search screen, user can search for a specific date and time for a recording and view it in Playback mode. This is useful for hunting a specific recording of an incident if you know the date and time it occurred.
- **File List:** click [File List] button to enter into the [Event Search] screen shown as Picture 5-16, the video recordings for the time quantum will appear in the screen.
- **Playback Mode:** You can use the Playback Control bar to operate the Fast Forward (X2, X4 and X8), Slow play (1/2, 1/4 and 1/8 speed), Play, Pause/Frame, Rewind(X2, X4 and X8). When ending playback, DVR will return back to previous menu.
- **Play control Bar:** the play control bar will display current playing processing shown as Picture 5-20. When user click any time at the control bar and this point have not any record file, system will auto return back to previous menu.

5.3.4.2 Channel Select

Click [Main Menu→Search→Record search→Playback] to enter into the interface shown as Picture 5-15; then tick-select the channel you want to playback; and click [Play] button to enter into playback mode shown as Picture 5-16;



Picture 5-15



Picture 5-16

5.3.4.3 Event Search

Click [Main Menu→Search→Event Search] to enter into the interface shown as Picture 5-17.

You could highlight and double-click the desired record for playback. And you also can filter the records you want to view based on date, time, and channel and record mode search.



Picture 5-17

⏮ (First Page): go to the first page on the list. When you view other pages, clicking [First] button brings you back to Page one.

⏪ (Previous page): go to the previous ones of current page. Clicking [Pre] button will take you back the previous ones of current page (except the first page).

⏩ (Next page): go to the next ones of current page. Clicking the [Next] button will take you to the next ones of current page (except the last page)

⏭ (Last page): go to the last page. Clicking the [last] button will make you enter into last page quickly.

ALL (Select All): Allows you to select all the events on the current page.

Inverse (Select Invert): Allows you to select other events on the current page except those you have currently selected.

5.3.4.4 File Backup

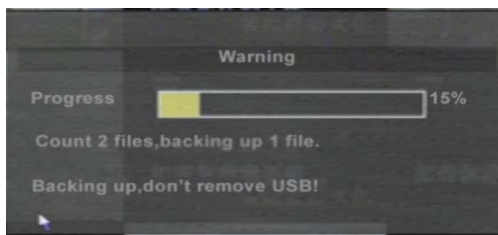
You can back-up the record file by event or time.

5.3.4.4.1 back-up file by event



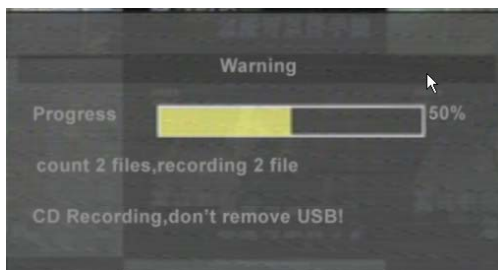
Picture 5-18

In the [File List] mode, if you wish to backup records, please tick-select the BAK check-boxes which correspond to the records and click [Backup] button to enter into the below windows illustrated in Picture 5-18



Picture5-19

Select USB as backup device and click [Ok] button, and then enter into the window shown as Picture 5-19.



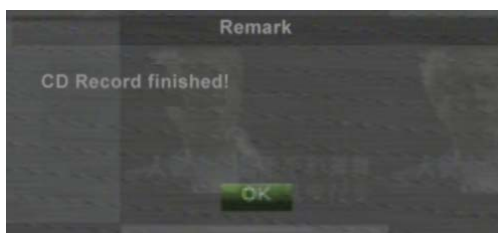
Picture5-20

Select DVD as backup device and click [Ok] button, and then enter into the window shown as Picture 5-20.

After backup finished, please click [OK] button shown as Picture 5-21.

Note:

- USB backup file will be saved as *.264 format and CD backup record as *.nvr format.
- You could playback the record files via Dvr Client player. When installing Dvrclient, system will auto install the player.



Picture5-21

5.3.4.4.2 back-up file by time


Also allow you back-up record files by time. Please follow below steps to back up files by time:

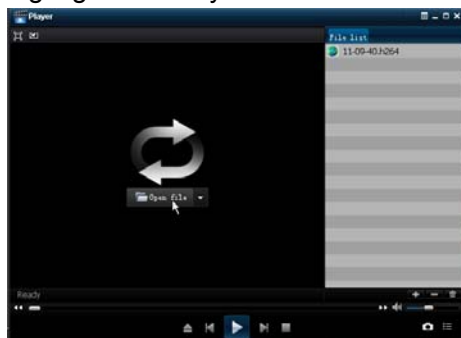
1. input start time and end time on the time edit box;
2. Click [Search] button;
3. Tick-select all the files you desire to backup;
4. Click the [Backup] on the bottom.

Details operations please refer to section 5.3.4.4.1.

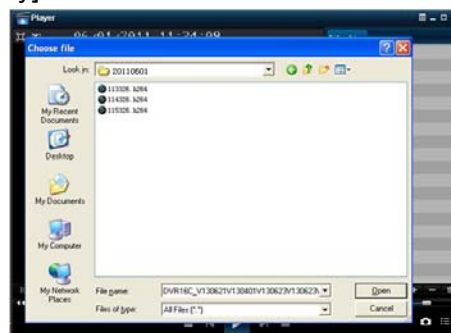
5.3.4.4.3 Media Player backup

1. Copy one backup file to your PC.

2. Open Playback player and click “+” icon or  button to find/select the backup file, and then click [open] button.
3. Highlight the file you have selected and click [Play] button.



Picture5-22



Picture5-23



: Play button: click the icon to playback the backup record;



: Pause button: click the icon to pause the backup record;



: Stop button: click the icon to stop the backup record;



: Next: Click the icon to play next record;



: Prev.: Click the icon to play previous record



: Slow button: click the icon to slowly play the backup record;



: FF button: click the icon to forward to play the backup record;



: Open: click the icon to open one record file.



: click the icon to enter into full screen mode.



: Click the icon to never place one target to top.



: Click the icon to place one target to top.



: Click the icon to place one playing record to top.



: Snapshot button: click the icon to capture the live image and save the captured one to directory:\\video client\\capture.



: Volume Adjust: click the icon to adjust the volume.



: Add fold or file to player.



: Delete the listed file



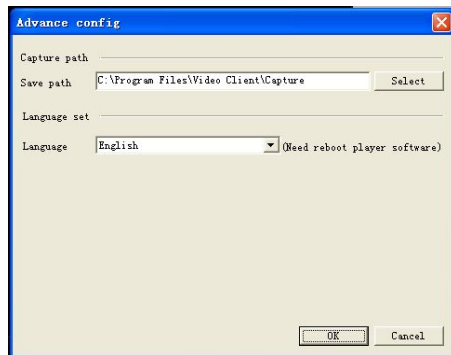
: Delete all the files in the list



: unfold or fold the list files

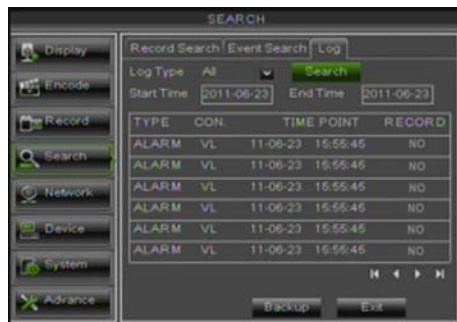


Advance Configuration: click the icon to set one captured path and language shown as Picture 5-24.



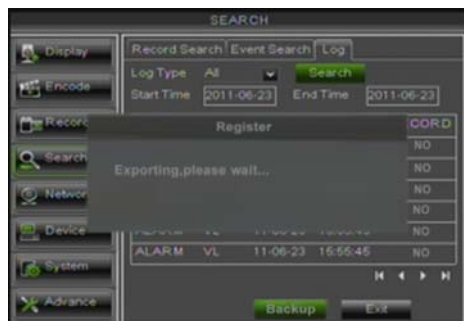
Picture5-24

5.3.4.5 Log Search



Picture5-25

Go to [Main menu→Search→Log] option to enter into the Log search interface shown as Picture 5-25.



Picture5-26

Click the [Search] button to search all the log information, and then click [Backup] button to export all the logs shown as Picture 5-26.

5.3.5 Network set

5.3.5.1 Network

Click [Main menu→ Network] option to enter into the network set interface shown as Picture 5-27.



Picture5-27

After selecting network mode - such as DHCP, PPPOE or static allocation- and setting up web ports, you can visit DVR remotely through a network or internet.

UPnP (Universal Plug and Play) function: If router supports UPnP function and set <UPnP> to On, system will automatically forward port to router.

DNS: DNS server is generally provided by local ISP. Herein please enter the IP address of your DNS



Picture5-28

When selecting DHCP from the Type, A router will automatically allocate IP address for your DVR. After restarting each time, the IP address captured by your DVR may be different. So, port forwarding is required when you visit a remote DVR.

1. Select DHCP and click [Save] button;
2. Exit and restart DVR;
3. Input media port and web port
4. Set IP address captured by DVR and web port to a router

5. Visit a remote DVR

http: // public net IP: web port (such as: 8080)

http: //intranet IP: web port (such as: 8080 - only use for Intranet)

6. Input the IP address of your domain name server

Friendly Reminder:

1. **All the parameters you set are available only when you click [Apply] and after system are restarted.**
2. **User need to change MAC address when there are multiple DVRs at the same local area network. Details please refer to section 5.6.2.5 -System Information.**



Picture 5-29

When selecting Static from the Type, user can directly input IP address, Subnet Mask, Gateway and DNS shown as below picture 5-29.

1. Set your net type to Static;
2. Set media port number (such as 9000), and the port need to be forwarded to a router.
3. Input web port number (such as 8080), and the port need to be forwarded to a router;

4. Input a specified IP address to [IP address] column;

5. The Subnet Mask, gateway and DNS server should be consistent with your router's configurations.

6. Input DNS address. Please check router firstly. The setting should be consistent router's

7. Click [Apply] button

8. Now you could remotely visit the DVR via IP

http: // public net IP: web port (such as: 8080)

http: //intranet IP: web port (such as: 8080 - only use for Intranet)



Picture 5-30

When selecting PPPoE from the Type, user can input user name and password provided by ISP and set Media and Web port. And now you can visit your remote DVR by using the IP address captured after registering a domain name and web port and connect to your DVR via public network.

DDNS (Dynamic DNS) is a service that register a domain name and the floating IP address with the DDNS server so that the domain name can be routed to the IP address even if the IP address is

changed in a dynamic IP system.



Picture 5-31

You can apply for a DDNS account for free at the web www.3322.org or www.dyndns.org.

You can register on DVR2009.3322.org or dyndns.org website and get a domain name, user name, and password.

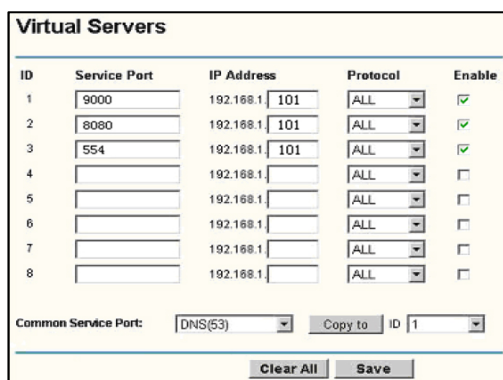
- **Server:** select DDNS provider
- **Host name:** input the host domain name you have registered at dynamic domain name system, such as:

- 6 **User Name:** Input a user name registered before applying for a domain name;
- 7 **Password:** Input a password you set when registering a user name.
- 8 Click [Apply] button and restart the DVR;
- 9 Enter the domain name (such as: <http://superdvr.3322.org:8080>) to visit your remote DVR.

5.3.4.2 Router's Port Forwarding

Port forwarding is required when you want to access the DVR connected to the router from outside of the router's network.

If PPPoE is selected, port forwarding is not required.



Picture 5-32

1. Input router's IP address from IE-based browser to open the Router configuration interface shown as Picture 5-32;
2. Click [Transmittal rule] option to take you to the port forwarding instructions for your router;
3. Set the corresponding parameters illustrated in Picture 5-30. When server port (9000) and web port (8080) forwarding the DVR IP address, user can visit the DVR remotely.
4. The DVR IP address for the intranet should be 192.168.1.101, you should forward server port and web port to this IP address respectively.

Friendly Reminder: The router's port forwarding interface may be different, however, when entering into virtual server, user will always need forward port 0080 and port 9000 of router to IP address of DVR allocated or automatically captured, and select [All] or [Both] in corresponding protocol column and save the above setting.

Above steps may differ from the router device depending on the manufacturer.

5.3.4.3 Email set



Picture 5-33

Click [Main Menu→Network→Email] option to enter into the email set interface shown as Picture 5-33.

SSL: is a security link transport protocol. You can encrypt your communication info (including your email) using SSL to prevent hackers from monitoring your email or communication info and even your password.

Please set SSL to “On” via Gmail.com server, and set to “Off” via other mail server.



Picture 5-34

- **SMTP Port:** indicate one kind of mail transmittal port opened by Simple Message Transfer Protocol (SMTP). The port number for most mails is 25 except such as Gmail server (Port number: 465).
- **SMTP server:** indicates server address you used.
- **Sender address:** indicates sender's email address. The email address should be consistent with the server you use. That is to say, when you use email address – aaa@gmail.com, the according server should be smtp.gmail.com.

- **Receiver address:** indicates receiver's email address. The email address is used to receive image transmitted from motion detection alarm of DVR. Please clear the images you have received as soon as possible to avoid overloading your email account.

For detailed SMTP protocols settings refer to the below picture 5-35 & Picture 5-36.



Picture 5-35



Picture 5-36

5.3.4.4 Mobile Set

The DVR is currently compatible with mobile phones running Andriod, Windows Mobile, Symbian operating systems, Iphone and Black berry on 3G networks.



Picture 5-37

Click [Main menu→Network→Mobile] to enter into [Mobile] set interface shown as Picture 5-37

User Name: indicate user name of DVR, and support numbers and characters

User password: indicate user password of DVR

Server port: Mobile monitoring port. Setting range is between 1024 and 65535.

Please note that the server port is not equal to the port you have set to network set.

5.3.4.5 NTP function



Picture 5-38

- **NTP Service** : Allow you enable/disable the NTP function.
- **Server Address**: currently support three servers, including time.windows.com, time.nist.gov and pool.ntp.org.
- **Time Zone**: System supports thirty Time Zones.
- **Update now**: Click [Update Now] button to change the above NTP set.

Note: The above change will be available only when system connected to internet.

5.3.6 Device Management

5.3.6.1 HDD Set

Click [Main menu→Device→HDD] to enter into the interface shown as Picture 5-39.



Picture 5-39

When DVR is connected to a HDD, the system will automatically detect if HDD is normal or not;
If the cable connected to HDD is loosen or HDD is abnormal, HDD status will be shown as “No Disk”, or, If HDD need to be formatted, status will be shown as “no format”, otherwise, the HDD status will be shown as “Normal”



Picture 5-40

- **NO**: indicate HDD no pre-seted by system.
- **Status**:: It will be available only when HDD have been formatted.
- **Total Space** – Total size of the hard drive currently installed.
- **Free Space** – Total amount of free space available on the hard drive currently installed.
- **Useable Rec. Time** – Free space currently available in hours.

➤ **Auto-overwrite** – When set to ENABLE the DVR will record over the oldest files on the hard drive. The DVR will always be able to record events as they happen, however, it does means that you'll need to get important events off the HDD before they're overwritten; and if overwrite is set to DISABLE the DVR will stop record once the DVR is full. Whilst you won't lose old footage, you run the risk of missing new events as they happen. Be sure you want to do this before selecting it.

➤ **HDD Format** – Formatting the HDD will erase all data (i.e. footage) which is stored on it, and re-create the FAT (file allocation table).

➤ **USB Format** - If you have a USB flash drive connected to the DVR, you can format that, too. To do this, click the [USB Format] button and click [OK].

Note: It is an important first step when configuring your DVR to make sure that the hard drive (HDD) options are correctly set. So, strongly suggest that you do format the HDD before start the first record.

5.3.6.2 PTZ Set

Click [Main Menu→Device→PTZ] to enter into the below window shown as Picture 5-37



Picture 5-41

You could select the channel you desire to control and set PTZ protocol (Pelco-D or Pelco-P), Baud Rate (1200, 2400, 4800, 9600), Data bit (8, 7, 6, 5), Stop bit (1, 2), Parity Check (None, Odd, Even, Mark, Space), Address Code and Cruise status respectively. Please note the PTZ device can be activated only when a channel in connection with the PTZ camera is selected.

5.3.6.3 Alarm Set

Click [Main Menu→Device→Alarm] to enter into the below window shown as Picture 5-38. Now you can perform alarm set based on different status. Details please refer to List 5-1.



Picture 5-42

- **No:** allow you select one desired channel
- **I/O Status:** allows you select the three options – NO (Normal Open), NC (Normal Close) and OFF. Set to “Normal Open”, I/O status Alarm will be activated while sensor is ON; set to “Normal Close”, I/O status alarm will be activated while sensor is OFF; set to “OFF”, I/O status alarm will not be triggered.
- **Alarm out:** allow you connect external alarm sensor.

- **Latch:** you can set how long the buzzer will sound when external sensor alarm is detected (10s, 20, 40s, 60s);
- **Show Message:** You can set show message on the screen when sensor alarm is detected.
- **Buzzer time:** you can set how long the buzzer will sound when motion is detected (Off, 10s, 20, 40s, 60s);
- **Send Email:** allows you set the alarm images is issued to a specified email or not.
- **Full screen Alarm:** The function is defaulted to “On”. When the motion detection or external alarm is triggered, the corresponding channel will be switched to the full screen mode.
- **Record Delay:** you can set how long alarm record will last when alarm ends (30s, 1minute, 2minute, 5minute);
- **Copy:** allow you copy all the setting of one channel to other ones.

Alarm Type	Function
Video Loss	Sends alarm when DVR can't receive video signal (such as camera damage, cable broken or damaged or power supply malfunction).
Motion Detection	When an object moves into motion detection area, alarm will be triggered. You can adjust sensitivity level to suit the needs of your actual application environment.
I/O Status	System can convert alarm signal triggered by external sensor into signal identified by system.

HDD loss	When Hard Drive is not detected (HDD damage, power supply malfunction), or HDD auto-overwrite is off, and free space is not enough, an alarm will be triggered.
-----------------	---

List 5-1

5.3.7 System

5.3.7.1 General set

Click [Main Menu→System→General] to enter into the interface shown as Picture 5-43



Picture 5-43

You will be allowed to modify system date, time, date/time format, language, video format and auto logout.

And click [DST Setup] button to enter into the below interface shown as Picture 5-44.



Picture 5-44

Herein you are allowed to set DST status and mode

5.3.7.3 Motion

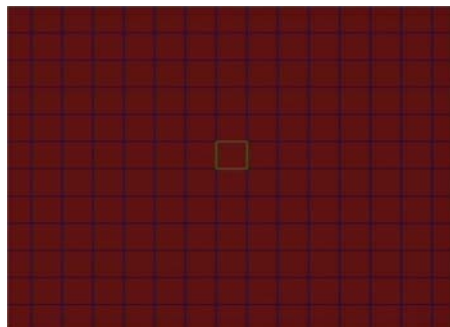
Click [Main menu→System→Motion] option to enter into the interface shown as Picture 5-45.



Picture 5-45

- **Channel:** allow you enable/disable the motion function for any channel.
- **Area:** Click the [Setup] button to enter into area setup interface shown as Picture 5-45.
- **Sensitivity:** allow you to set sensitivity level of motion detection from higher to low with 8 being the most sensitive.
- **Alarm out:** allow you connect external alarm sensor.
- **Latch:** you can set how long the buzzer will sound when object move is detected (10s, 20, 40s, 60s);
- **Show Message:** You can set show message on the screen when motion alarm is detected.

- **Buzzer time:** you can set how long the buzzer will sound when motion is detected (10s, 20, 40s, 60s);
- **Send Email:** allows you set the alarm images is issued to a specified email or not.
- **Full screen Alarm:** The function is defaulted to "On". When the motion detection or external alarm is triggered, the corresponding channel will be switched to the full screen mode.
- **Record Channel:** the record channel will be activated when the object move is detected.
- **Record Delay:** you can set how long alarm record will last when alarm ends (30s, 1minute, 2minute, 5minute).
- **Copy:** allow you copy current channel parameters to any other channel or all channels.



Picture 5-46

The channel will be separated into a 15X10 grids (NTSC mode). When any object moves into the motion detection area, and the area where the object is located is displayed in red and motion detection will be triggered. In the semi-transparent area the motion detection is not activated.

5.3.7.4 Authority Users



Picture 5-47

Click [Main Menu→System→user] option and then enter into the interface shown as Picture 5-47.

The model supports up to eight users with one Admin and seven users.



Picture 5-48

Click [Edit] option on the bottom of screen to enter into the interface shown as Picture 5-48.

User name consist of eight characters and fixed-length for password is 6 bit



Picture 5-49

5.3.7.5 System

Click [Main Menu→System] and then enter into the interface shown as Picture 5-50.



Picture 5-50

Now user can check the current Device name, Device ID, Device type, Device S/N, MAC address, IE version, Software version, Panel version etc.

Note: please revise the MAC address for each DVR respectively when connecting multiple DVRs to an intranet; otherwise, you maybe fail to connect to network. Prefix of MAC address should be 00-11

5.3.8 Advance

5.3.8.1 Maintain

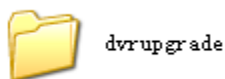
Click [Main menu→Advance→Maintain] to enter into the maintain interface shown as Picture 5-51.



Picture 5-51

- **System Update:**
 1. You can insert a USB memory into USB port for updating;
 2. Do not take out the USB memory or break the power during the update.
 3. When the update is done, system will be automatically restarted.
 4. Please manually recovery ex-factory default after system rebooting.

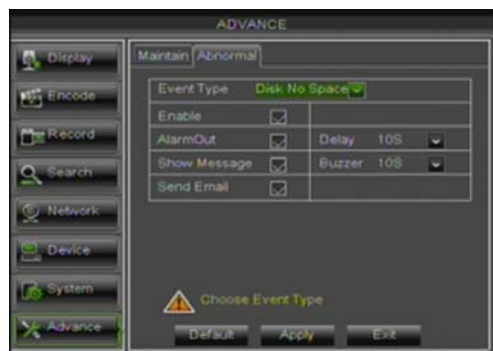
- [Admin] is authorized to set common user's authority.
- **Log Search:** allow you check the entire system log.
- **Parameter:** allow you set all the parameters.
- **System maintain:** allow you update version, recover ex-factory value, device reboot and shut down.
- **Disk Manage:** allow you manage and control the HDDs.
- **Remote Login:** allow you remote login DVR.
- **Rotate Control:** allow you sequence live screens for all the channels.
- Manual record: allow you manually start/stop record.



Picture 5-52

5.3.8.2 Abnormal

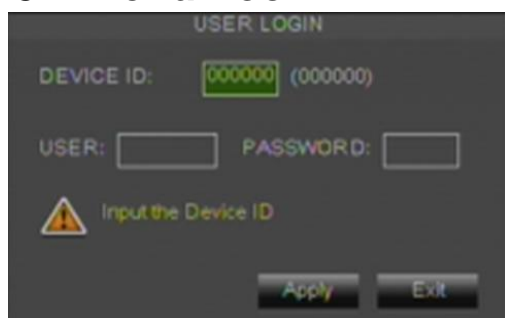
Click [Main menu→Advance→Abnormal] to enter into the abnormal interface shown as Picture 5-53.




Picture 5-53

- **Event Type:** support the three abnormal types: Disk No Space, Disk Error and Video Loss.
 - **Alarm out:** select [Enable] or [Disable]
 - **Latch:** you can set how long the buzzer will sound when external sensor alarm is detected (10s, 20, 40s, 60s);
 - **Show Message:** You can set show message on the screen when sensor alarm is detected.
- **Buzzer time:** you can set how long the buzzer will sound when motion is detected (Off, 10s, 20, 40s, 60s);
 - **Send Email:** allows you set the alarm images is issued to a specified email or not.

5.4 Menu Lock



Picture 5-54

Considering a system safety feature you can click  icon to lock system interface when leaving the DVR. If you want to login to the DVR again, you would input device code and password to unlock the interface shown as Picture 5-54.

Friendly Reminder: User only has a permission to access [Video Search] menu. But Administrator has full authority over Main Menu operations.

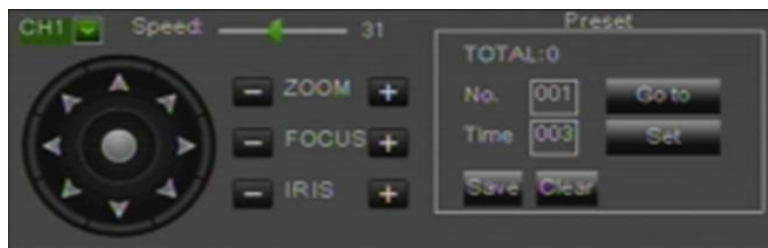
5.5 Split mode

The model displays 4/8 live images in the sequence of single, 4-split and 9-split modes.

If you enter into 4-split mode, the live images will be displayed in turn CH1~4, CH5~8...and CH13~16.


If you enter into 9-split mode, the live images will be displayed in turn CH1~9→CH10~16

5.6 PTZ Control



Picture 5-55

We introduced setting PTZ parameters previously in chapter 5.2.5.3. Here we will discuss how to operate PTZ controls.

Click the  icon to enter into [PTZ control] menu shown as Picture5-54. Now user can control the camera with Pan, Tilt and Zoom capabilities.

Click [Zoom-/+] button to zoom in / out the image; Click [Focus -/+] button to focus the image; Click [Iris -/+] button adjust iris to open or close.

Cruise Set

Open auto cruise function on PTZ setting menu if you want to setup cruise function (system default: off), and set up cruise channel, cur point and total quantity and stop time etc

- **Total:** set up pre-set bit quantity
- **Cur Point:** indicates starting point cruised. System default point is 01. the model support up to 255 pre-set bit.
- **Stop time:** sets the stop time at each point
- **GOTO:** allow you go to a specific preset point.
- **Set:** allow you set a set of specific preset points of a PTZ camera.
 1. Select a camera you desire to set a preset point;
 2. Adjust the camera in a desired direction;
 3. Click [Set] to set the point as preset point;
 4. Click [Save] to save the preset point;
 5. Follow the above step to add one more preset point.
- **Save:** save all the preset points
- **Clean:** allow you delete one selected preset.

Note: Up to 254pre-sets per one camera can be stored. However, actual preset quantity differs depending on PTZ performance.

5.7 Record search

You could enter into [Record Search] menu from Pop-up menu conveniently and quickly and search/playback the record histories. We introduced Record search details previously in chapter 5.2.4.

5.8 Mute

You are allowed to click the icon  to control the volume of DVR.

5.9 Record

You can start manual record function, or you also can click [Rec.] button on the Front panel or Remote controller to activate manual record. Please stop record manually once you activate manual record.


5.10 Stop record

To stop record quickly, please click the icon [] or [Stop] button on the front panel or remote controller.

5.11 Start Sequence

After channel sequence time is set, click [] icon and auto-sequence will be conducted at the set interval (details please refer to section 5.3.1.2.)

5.12 Start Cruise

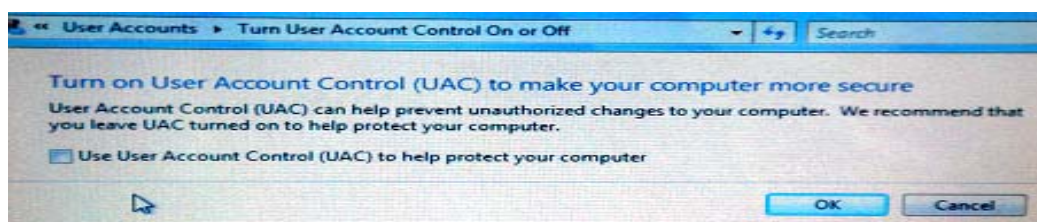
If multiple presets are specified, the PTZ camera will automatically move to the entire preset one at a time whilst user activates [Start Cruise ] options.

Chapter 6 Web Application Manager

6.1 Plug-in download and installation

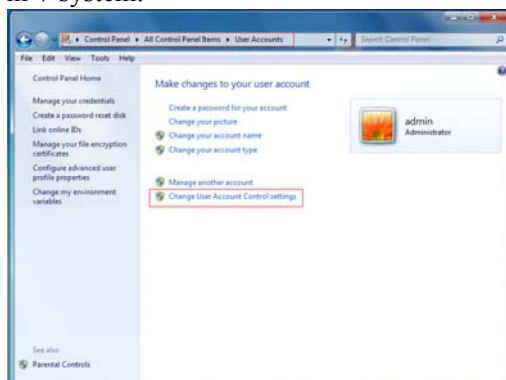
Open your web browser and input the IP address and web port of DVR, such as : <http://172.18.6.202:8080/> . If your computer is connected to internet, it will download and install “ActiveX” Plug-in automatically. If your computer system is Vista, you may need to setup the user authority. Details please refer to the below picture: Start → setup→ control panel (Tick “√” use UAC to help protect your computer and confirm OK) .

Vista system:

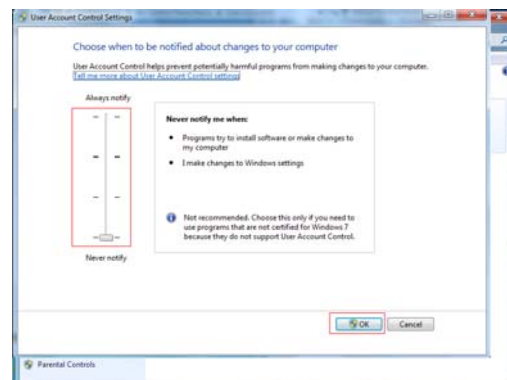


Vista

Win-7 system:



WIN7-1



WIN7-2

Reminder: If the plug-in program is not downloaded successfully, please check if your browser's safety level or firewall setting is too advanced. Please run IE →Tools→Internet options→Internet Custom level→Enable the options (details please refer to the below Picture 6-2).



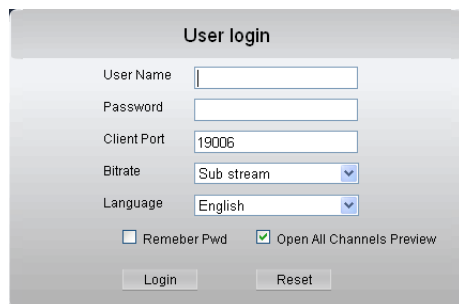
Picture 6-1

If running the web application for the first time, you need about one minute to finish download and install plug-in, please wait patiently.

Note: If you want to use the undated webcam at one computer which you already login before, please delete the old IE webcam and click [Start→Run] to input the command characters: “regsvr32/u HiDvrOcx.ocx”, then login again.

6.2 Web Application Manager Log-in

After plug-ins installation, please input user name, password and client port; and select <Main stream> or <sub stream>, and then allow you tick-select <Open All Channels Preview>;



The image shows a 'User login' window. It contains the following elements:

- User Name:** A text input field.
- Password:** A text input field.
- Client Port:** A text input field with '19006' entered.
- Bitrate:** A dropdown menu with 'Sub stream' selected.
- Language:** A dropdown menu with 'English' selected.
- Remember Pwd:** An unchecked checkbox.
- Open All Channels Preview:** A checked checkbox.
- Login:** A button.
- Reset:** A button.

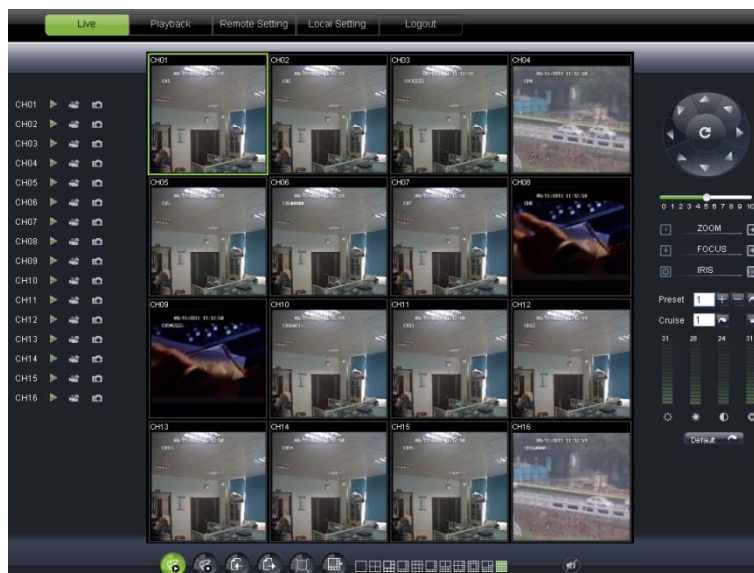
Picture 6-2

Now you click [Log-in] button, and then you are allowed to access a remote DVR and monitor live video images using Web browser anytime from virtually anywhere.

Noted that defaulted password is empty. System allows Administrator to set new password as per instructions in section 6.3.3 - [System set→User Configuration] menu.

6.3 Live interface

After successful logging-in web manager, you will enter into the Live interface shown as Picture 6-3



Picture 6-3

6.3.1 Menu Bar

Menu bar include [Live], [Replay], [Configuration], [Path Configuration] and [Logout] options

6.3.1.1 Live Display

After running the Web Application Manager on your local PC, system will be defaulted to enter into <Live> interface shown as Picture 6-3. You can click [Play] button to Open/close live images and enter into on-spot record and Capture, quad, 9-split or 16-split mode by operating the control bar on the bottom of screen.



: Volume switch



: Record icon: record will be saved to a specified position after starting record.

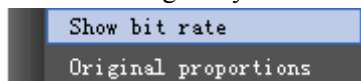


: Snapshot function: allow you capture the live images and save it to a specified position. The image should be saved as *.bmp format.



: clicking the icon will close/open the current channel's live mode

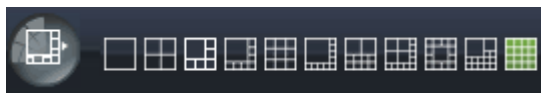
Or click the right key of mouse on each <Live> window to pop up the interface shown as Picture 6-4.



Picture 6-4

Show bit rate: show current bit rate;

Original Proportions: show original proportions.



: CH Display mode



: Allow you open all the <live> channels.



: Allow you close all the <live> channels.



: Display previous channels



: Display next channels



: Click the icon to enlarge current window to full screen; right-click to pop-up menu options, now allow you select <Exit full screen>


6. 3. 1. 2 PTZ Control




Picture 6-5

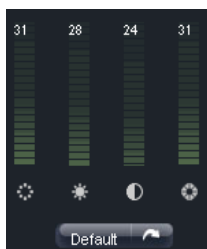
① PTZ moving Direction control: allow you control PTZ camera's direction. And the middle button is called [Auto-cruise] button.

②  PTZ speed control bar






③  : Iris, Focus and Zoom control

④  : Preset setting/clear; Start cruise /stop cruise


6.3.1.3 Video control

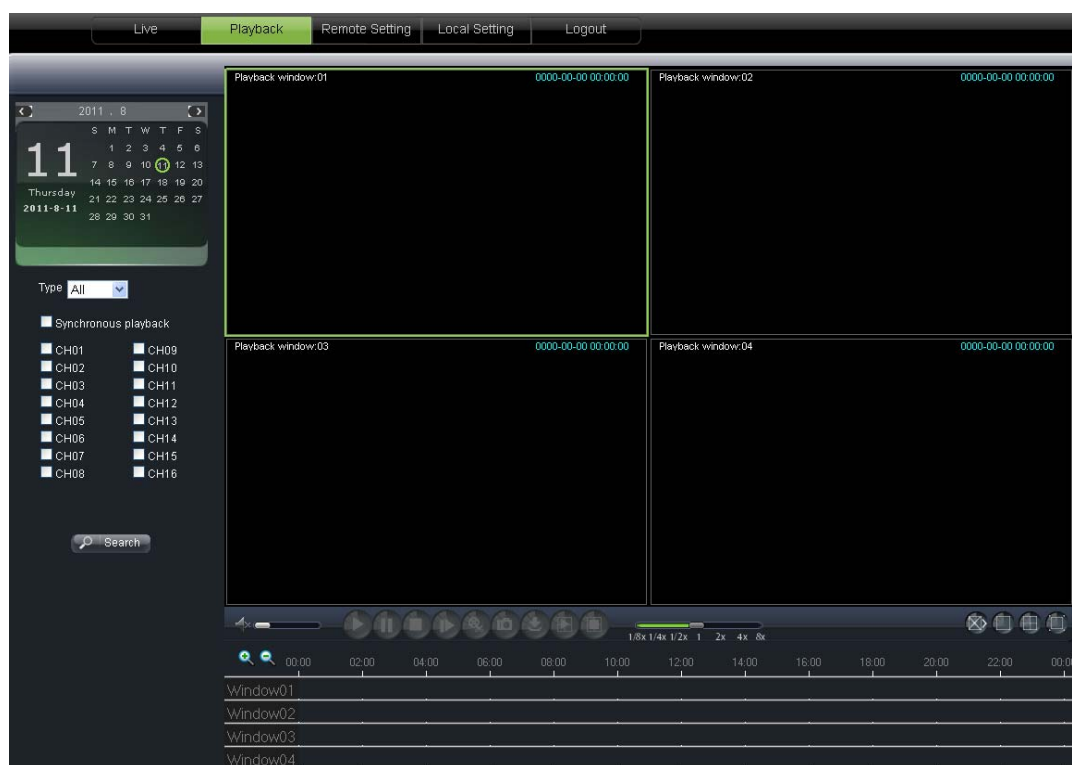


Picture 6-6

- : Adjust video Hue;
- : Adjust video brightness;
- : Adjust video Contrast;
- : Adjust video saturation;
- : Recover ex-factory default value.

6.3.2 Playback

Click [] icon to enter into <playback> interface shown Picture 6-7.

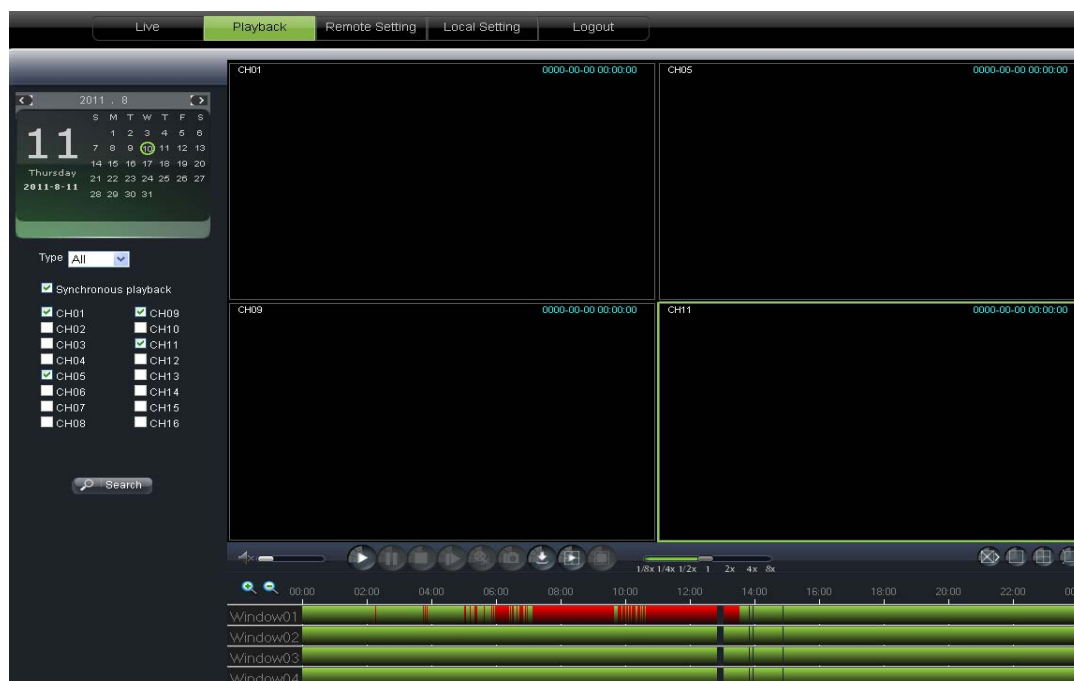


Picture 6-7

The Web Application Manager supports up to 4 channels playback simultaneously.

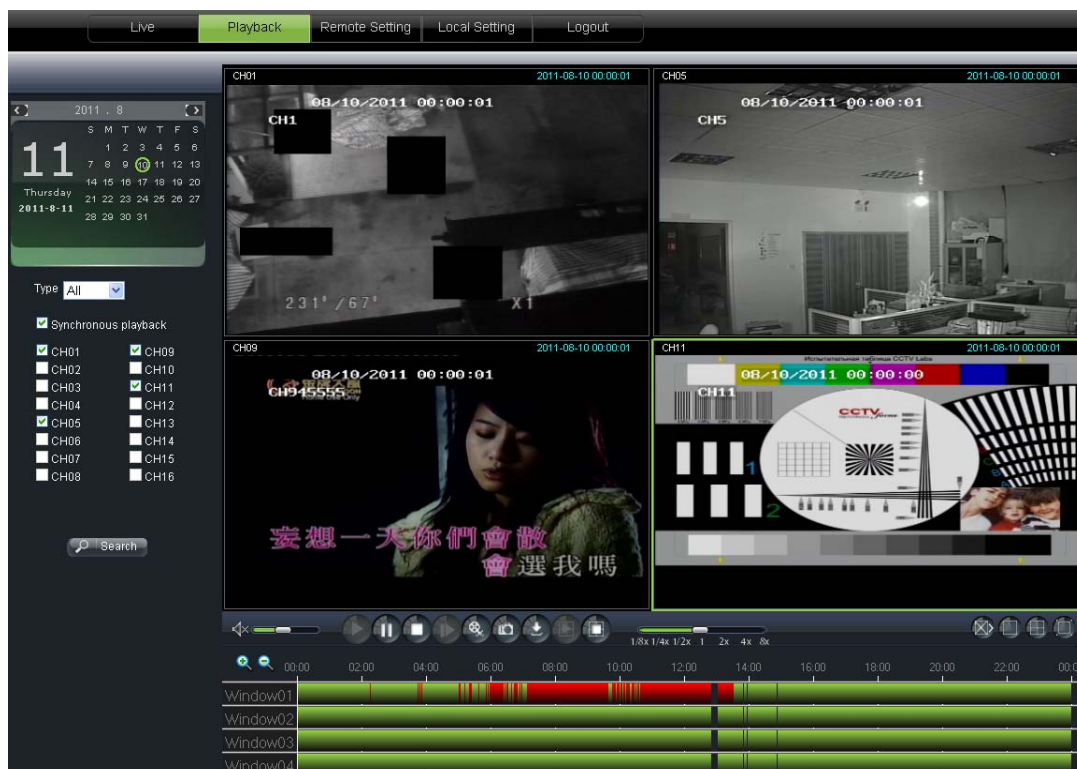
6.3.2.1 Record search

Firstly, select one day you want to check and tick-select <synchronous Playback> and the channels you desire to playback shown as Picture 6-8



Picture 6-8

Secondly, select record type (Normal record, Alarm record and All) and then click < Search > button shown as Picture 6-9. On the time axis, red part stand for alarm record, yellow stand for normal record and original part stand for no record during this period.



Picture 6-9

If you tick-select < ☒ Synchronous playback > option, that means the selected channel will playback synchronously; otherwise, you could separately control the channels playback.

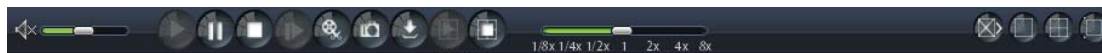
Thirdly, Click [] icon to start record playback. When mouse cursor is moving on the time axis, the current

time will appear in the screen.

Click [🔍/🔍] icon to zoom in/out the time bar display ratio shown as Picture 6-12.

6.3.2.2 Playback control

Below Picture 6-13 is playback control bar



Picture 6-10

Detail brief description is shown as below list

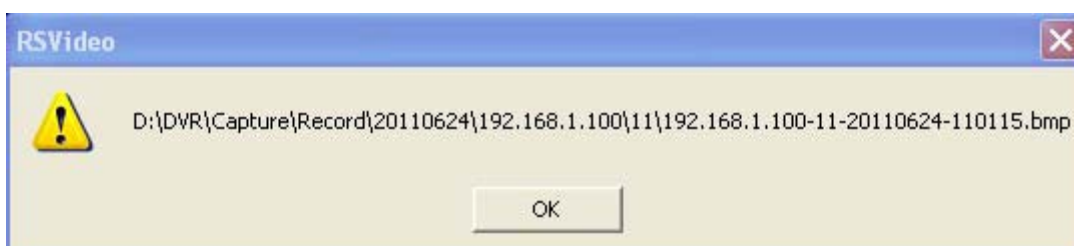
Key	Description	Key	Description
	Play		Open/close audio
	Pause		Volume adjust
	Stop		Playback control bar (x1/2, 1/4, 1/8, normal, x2, x4, x8)
	By frame		Stop all the play
	Clip		Single channel mode
	Capture		Quad mode
	Download		Full screen
	Open all the channels		
	Stop all the channels		

Record file clip

After opening playback, click [🔍] icon to clip the selected file; and click again to stop the clip function. Record clip file will be saved as *.264 format.

Snapshot function

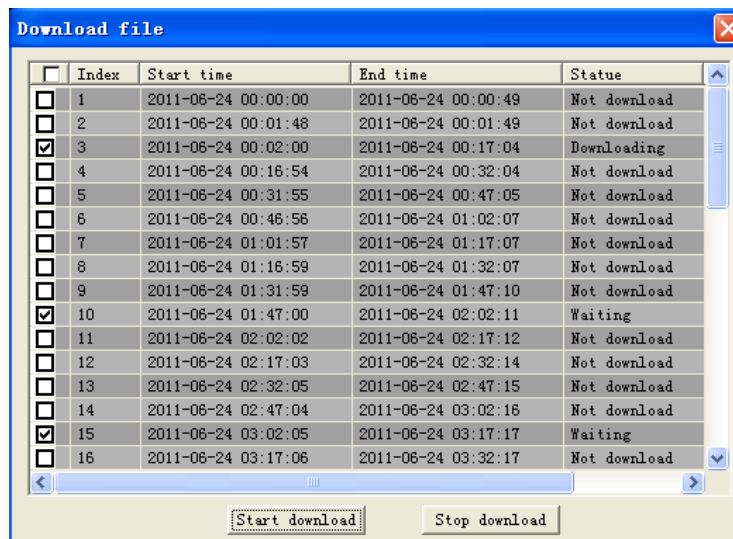
Move the mouse cursor to the channel you want to capture, and click [📷] icon to capture the live images remotely. After capturing the images successfully, you are allowed to save it to a specified path shown as Picture 6-11. The captured file will be saved as *.bmp format



Picture 6-11

Record file download

Click [] icon to enter into the below interface shown as Picture 6-12.



Picture 6-12

Tick-select the record file you want to download and click [Start download]

System will download the record file in turn and save to local PC.

6.3.3 Configuration

Click [Configuration] option to enter into the [Config] interface shown as Picture 6-13 and allow you set Display configuration, Record, Network, Alarm, Device, System parameters and Advance according to your actual request.

6.3.3.1 Display Configuration

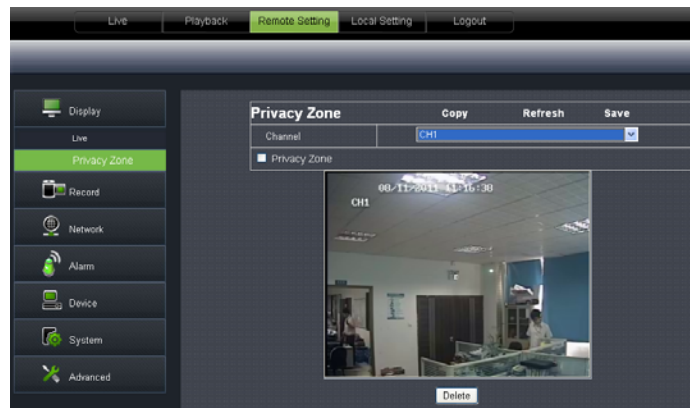
Unfold [Display] option to find its sub-options: Live and Privacy zone

1、**Live:** Allow you modify channel name, Position, Show time and Record time. If show time is set to <disable>, current system time will not appear on the screen on Live mode; and if record time is set to <off>, system time can't be found in the record file.



Picture 6-13

2、**Privacy zone:** Each channel could set up to four privacy zones shown as Picture 6-14. Details parameters please refer to section 5.3.1.3. If you want to delete one privacy zone, please firstly select one zone, and then click <Clear> button and click <Save> on the right corner



Picture 6-14

6.3.3.2 Record

Click <Record> option to unfold its sub-options: Record parameter, Schedule and Main stream.

- 1、 **Record Parameters:** Under [Record parameters] option, allow you set channel, record enable, pack time and Pre-record status shown as Picture 6-1



Picture 6-15

- 2、 **Schedule:** Detailed parameters please refer to DVR local setting.
Green stand for Normal record; Yellow stands for Motion detection; Red stands for I/O triggered record.



Picture 6-16

- 3、 **Main Stream:** detailed settings please refer to DVR local setting. Herein allow user modifies the resolution, frame rate, Bit rate and audio of the record channel.



Picture 6-17

6.3.3.3 Network Parameters

Unfold <Network> option to enter into its sub-options: Network, sub stream, Email, mobile and DDNS configuration.

- 1、The model support three network type, including Static, DHCP and PPPoE

Static: System default <Static> as its network type. User could allocate IP and perform Port forwarding for DVR according to different router. When set <UPNP> to “On”, user no needs to perform port forwarding. Once you modify its network parameters successfully, DVR will automatically restart.



Picture 6-18

DHCP: Set network type to “DHCP” shown as Picture 6-19. Relative parameters should be consistent with DVR local setting.



Picture 6-19

Set network type to “PPPoE” shown as Picture 6-20. Its user name and password should be consistent with DVR local setting.



Picture 6-20

- 2、 **Sub stream** (shown as Picture 6-21): Relative parameters should be consistent with DVR local setting.



Picture 6-21

- 3、 **Email setting:** Click [Email setting] option to allow you set alarm email configuration parameters shown as Picture 6-22. Detailed parameters should be consistent with DVR local setting.



Picture 6-22

- 4、 Mobile: Its user name, password and port No should be consistent with DVR local setting shown as Picture 5-23.



Picture 6-23

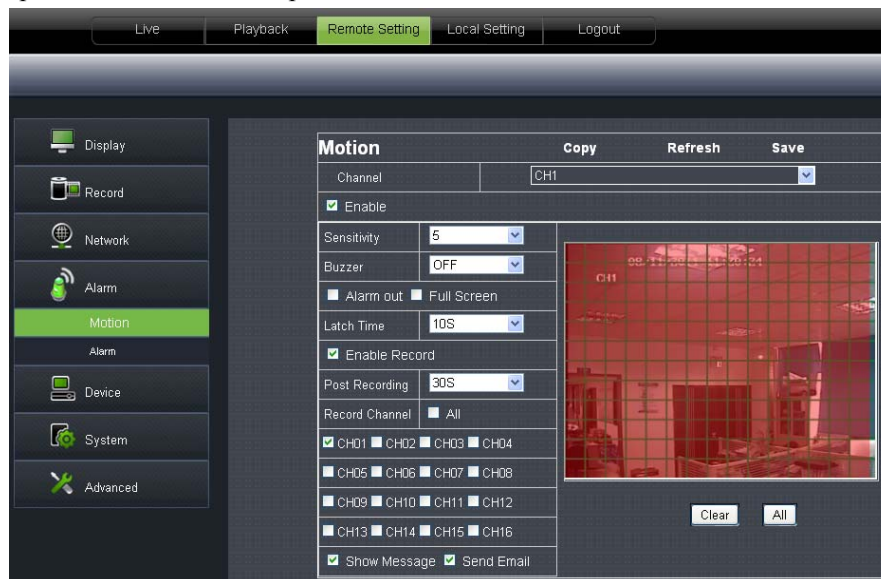
- 5、 DDNS Setting: After user applies for DDNS service shown as Picture 6-24, you could enable <DDNS> function under any one network type mode (Static, DHCP and PPPoE). Now you remotely visit the DVR through domain name (<http://domain name: port No>). Details setting should be consistent with DVR local setting.



Picture 6-24

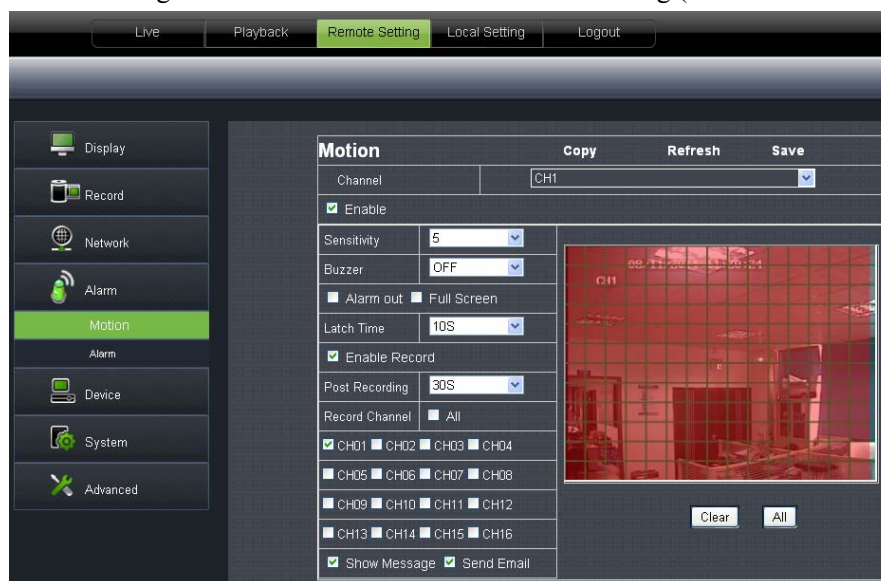
6.3.3.4 Alarm Set

Click <Alarm> option to unfold its sub-options: Motion, I/O Alarm shown as Picture 6-25.



Picture 6-25

- 1、 **Motion Detection:** allow you configure its <Sensitivity>, <Alarm out>, <Alarm record> and <Alarm Capture> etc. Details setting should be consistent with DVR local setting (Shown as Picture 6-26).



Picture 6-26

- 2、 **I/O Alarm:** allow you configure <I/O Status>, <Alarm output>, <I/O Alarm record> and <Alarm email> etc. Details setting should be consistent with DVR local setting (Shown as Picture 6-27).



Picture 6-27

6.3.3. 5 Device

Click <Device> to unfold its sub-options: HDD and PTZ.

- 1、 **HDD:** allow you check out HDD status and overwritten time shown as Picture 6-28. Detail setting should be consistent with DVR local setting.



Picture 6-28

- 2、 **PTZ Configuration** (shown as Picture 6-29): details setting should be consistent with DVR local setting.



Picture 6-29

6.3.3. 6 System

Click <System> option to unfold its sub-options: General, Users and information.

- 1、 **General:** User could check DVR's language and video system, and also set system time, date format, DST and NTP shown as Picture 6-30. Details setting should be consistent with DVR local setting.



Picture 6-30

- 2、 **Users:** Allow you configure user name and password shown as Picture 6-31. Details setting should be consistent with DVR local setting.



Picture 6-31

- 3、 **Information:** Allow you check out device name, number, type, MAC address, software version, IE version and hardware version shown as Picture 6-32.

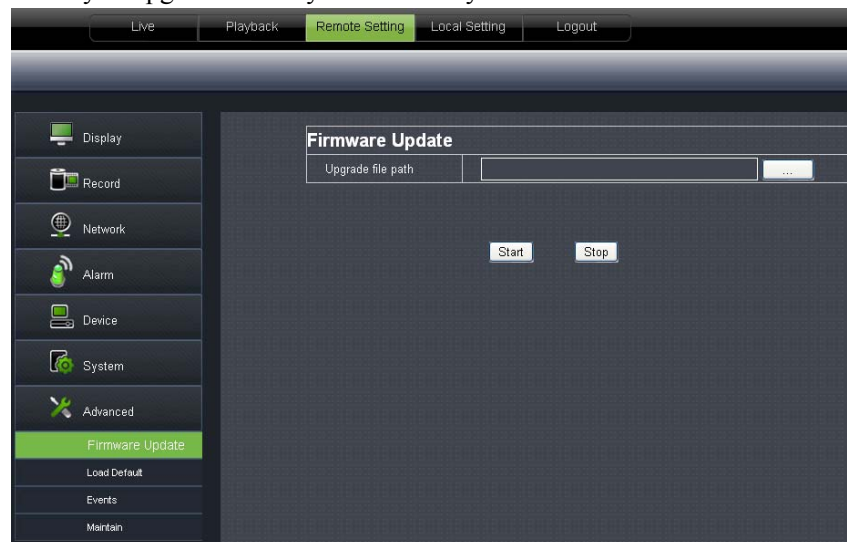


Picture 6-32

6.3.3. 7 Advanced

Click <Advance> to unfold its sub-options: System update, Load default, Events and system maintain etc.

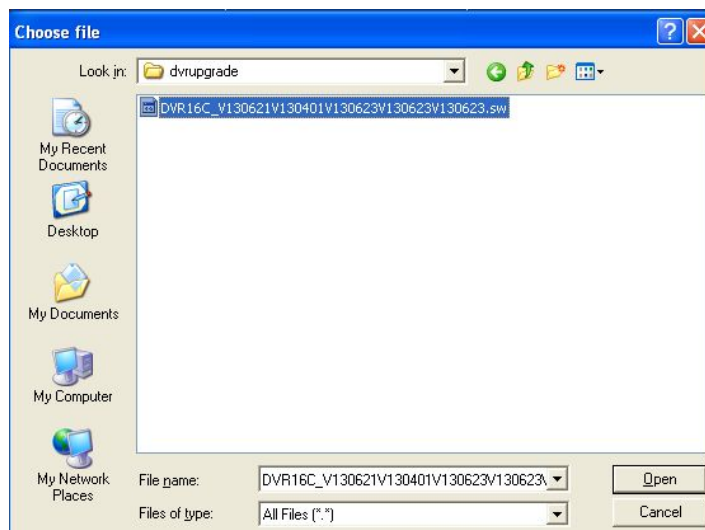
1、 System update: allow you upgrade DVR system remotely shown as Picture 6-33.



Picture 6-33

Please follow below steps to upgrade the system:

- a. Select the upgrade file's path shown as Picture 6-34. Please note that the format of upgrade file is *.sw.



Picture 6-34

- b. Click <Start update>, now processing bar will display current upgrade status shown as Picture 6-35.



Picture 6-35

- 2、 **Load Default:** allow you recover defaulted parameters of DVR remotely shown as Picture 6-36. Details setting should be consistent with DVR local setting.



Picture 6-36

- 3、 **Events:** allow you configure abnormal type, buzzer output time, and alarm email and show message

shown as Picture 6-37. Details setting should be consistent with DVR local setting.



Picture 6-37

- 4、Maintain: allow you set auto system maintain for DVR remotely shown as Picture 6-38. Detail setting should be consistent with DVR local setting.



Picture 6-38

6.3.4 Local setting

Under <Local setting> option, user could set record path of record file (Live record and Playback clip file), download path of remote file, Snapshot path, File type (H.264 and AVI) and Interval shown as Picture 6-39.



Picture 6-39

6.3.5 Logout

Click the [Logout] icon to return back the log-in interface.

Chapter 7: Specification

Type	Device Parameter	16-CH DVR
Video / Audio	Video System	PAL/NTSC (Optional)
	Compression Format	Video: H.264 / Audio: 8kHz*16bit G.711A
	Display Resolution	D1: 704×576(PAL) 704×480 (NTSC)
	Record Resolution	CIF
	Record Frame Rate	PAL : 400 fps@CIF / NTSC : 480 fps@CIF
	Display mode	Support auto sequence and cruise
Record	Record mode	Always, Scheduled, motion, Alarm, Net-viewer record.
	Pack Time	15/30/45/60 min (adjustable)
	Playback mode	Normal play, Fast Forward, Rewind and slow play frame by frame.
	Backup	Support U flash disk, removable HDD, recorder and network backup
Alarm	Alarm mode	Motion Detection, Sensor triggered, Video Loss, HDD Full, HDD Error
Network	Network Function	Support Mobile surveillance, Remote Live surveillance and parameter setting.
	Network Protocol	Supports TCP/IP, DHCP, UDP, DDNS, PPPOE network Protocol
System Interface	Video input/output	16-CH Input / 2-CH Output; 1-CH VGA output or 1-CH HDMI output
	Audio input/output	4-CH Input / 2-CH Output
	Alarm input/output	16-CH Input / 1-CH Output
	HDD Interface	Support USB removable HDD and SATA HDD
	Network Interface	One RJ-45 10M/100M self-adaptable Ethernet interface
	USB Interface	Support Mouse, removable HDD and U flash disk backup and upgrade.
	PTZ Control	Embedded RS-485 port, supports PELCO-P & PELCO-D
General Parameter	Power Adapter	DC 12V 5A
	Operational Temperature	10℃~+40℃
	Operational Humidity	10%~90%
	Power Consumption	10-15 W(exclude HDD)
	Dimension (W x D x H)	430×380×70mm (L×W×H)

Chapter 8: Appendix

8.1 Operation Function Table




Type	Title	Description	Page
Basic setting	Time setting	Set system date/time, display format and day-light saving time	26
	Language select	Set system language	27
	Channel setting	Set CH title and position; adjust image color parameter value; set CH display to ON / Off and time display/recording time overlaying to On/Off.	9
	Record setting	Set image quality, resolution, volume, record mode and pack time	10
	Record search	Time based search, channel based search and rec. mode based search.	12
	Record Playback	Specified time playback, scheduled playback, file list playback	12
	Playback mode	Play, play frame by frame, multi-speed forward and multi-speed rewind	13
	File backup	U flash disk and removable HDD backup, DVD recorder backup and network download	13
	HDD Manage	Check HDD status, usage space, setting HDD auto-overwrite	15
	VID/AUD Setting	Adjust VGA resolution, select system and volume control, set interval and channel display	26
Advanced Setting	User password	Set or modify user password	26
	Alarm setting	Set HDD loss, HDD space, video loss, I/O status, alarm management and Email alarm	15
	Motion detection	Set on/off status of MD; select sensitivity and set motion detection area.	25
	PTZ setting	Select CH and set PTZ protocol, baud rate and PTZ address for the CH	19
	Mobile surveillance	Set user name, password and server port.	19
	System maintenance	Set system auto maintenance, maintenance time regularly, system upgrade, ex-factory default value recovery and manual restart system	27
	Display mode	PIP display, Zoom in/out, split mode, auto sequence and cruise display	
Network setting	Network and Port setting	Select network mode and set net-viewer port, web port, DNS and DDNS parameters.	10
Network Function	Live display	Real-time video surveillance remotely	32
	Remote record	Set record mode and status of DVR remotely	32
	Remote playback	Check local record history via network	32
	PTZ control	Remotely control PTZ camera, position, focus, zoom and iris etc.	37
	parameter set of DVR remotely	Set local CH display, record, alarm, PTZ control parameter value via network	32
	Network download	Backup record file via network	32
Auxiliary function	System info	Check device ID, software version and MAC address	27
	()	In addition to illustrating picture, Parenthesis generally indicate	

		optional parameter value of previous menu.		
Menu button	Enter	Clicking the button will save current parameter.		
	Default Recovery	Clicking the button will recover current parameters to system defaulted value.	The option will be effective after clicking [Enter] button	
	ESC	Clicking the button will exit the current menu.		
Basic application Guide	① Time setting	Adjust system time		26
	② HDD Manage	Format HDD	The option will be effective after restart.	15
	③ Net setting	Set network type and web port (except of PPPoE, other type need forward web port to router of DVR.		10
	④ System Info	Modify MAC address		27
	⑤ Mobile Monitoring	Set relative parameter		19
	Other	PTZ setting, Record set and Language select etc		






List 8-1

8.2 Record Alarm setting

Please refer the below matrix: “⊥” stand for “only alarm but no record”; “AMR” stand for “alarm record”; “NLR” stand for “normal record”; and “NOR” stand for “no record”. Once alarm is triggered, alarm icon will occur, and when many alarms are triggered, alarm remarks will occur on the screen.

Record alarm setting		Alarm icon	Record Mode				
			Record after power on	Scheduled recording			Manual Record
				AMR	NLR	NOR	
Alarm mode	MD alarm		AMR	AMR	NLR	⊥	NLR
	I/O triggered alarm		AMR	AMR	NLR	⊥	NLR
	HDD loss, HDD Full		⊥	⊥	⊥	⊥	⊥
	Video Loss	Video Loss	⊥	⊥	⊥	⊥	⊥

List 8-2

In the record mode,  icon or  icon will appear on the screen. But when  icon and  icon appear on the screen that means a motion alarm is triggered. When  icon appears on the screen, that means HDD alarm has occurred..

8.3 Mail box server List

Web site	Mail box	Sender server (25)	Receiver server (110)
www.163.com	@163.com	smtp.163.com	pop3.163.com
	@vip.163.com	smtp.vip.163.com	pop.vip.163.com
	@188.com	smtp.188.com	pop.188.com
	@126.com	smtp.126.com	pop3.126.com
	@netease.com	smtp.netease.com	pop.netease.com
	@yeah.net	smtp.yeah.net	pop.netease.com
www.qq.com	@qq.com	smtp.qq.com	pop.qq.com
163.net		smtp.163vip.net	popx.163vip.net
www.sina.com	@sina.com.cn	smtp.sina.com.cn	pop3.sina.com.cn

www.yahoo.com	@yahoo.com.cn	smtp.mail.yahoo.com.cn	pop.mail.yahoo.com.cn
	@yahoo.com	smtp.mail.yahoo.com	pop.mail.yahoo.com
google.com	@gmail.com	smtp.gmail.com(465/587)	pop.gmail.com(995)
www.china.com	@china.com	smtp.china.com	pop.china.com
www.sohu.com	@sohu.com	smtp.sohu.com	pop.sohu.com
Mail.163.com		smtp.163.net	pop.163.net
Mail.163vip.com		smtp.163vip.net	pop.163vip.net
Mail.tom.com	@tom.com	smtp.tom.com	pop.tom.com
Mail.263.com	@263.net	smtp.263.net	pop3.263.net
x263.net		smtp.x263.net	pop.x263.net
263.net.cn		smtp.263.net.cn	pop.263.net.cn
139 mail box	@139.com	smtp.139.com	pop.139.com
21cn.com		smtp.21cn.com	pop.21cn.com
Vip.21cn.com		vip.21cn.com	vip.21cn.com
etang.com		smtp.etang.com	pop.etang.com
elong.com		smtp.elong.com	pop3.elong.com

List 8-3

8.4 Troubleshooting

1. Q: What can I do if the system does not detect the HDD?
A: Check if the power supply system is properly connected and data cord and power cables are securely connected.
2. Q: We have changed the password but do not remember the new password, how can we access the system?
A: If you forget system password, please consult with the service personnel.
3. Q: We are not getting any video signal on the DVR, what is wrong?
A: Check camera video cable and connections; or check monitor video cable and connections; or confirm that the camera has the power and / or check camera lens setting.
4. Q: Why some channels display just a blank screen even if they receive video sources?
A: Check if the camera is connected to the system properly displays the image; check if the camera is properly supplied with power.
5. Q: Can the DVR have problems if it gets too hot, how can I prevent this?
A: The DVR has a fan to help it dissipate heat while it is running. Please place the DVR in a place where there is good air circulation and away from heat sources to increase stability and life of the DVR.
6. Q: "Record" Can not work normally, how to deal with?
A: Check if the current screen is in Play mode, pressing [Stop] button to exit the Play mode and then you can enter into the [Record] function.
7. Q: Why the Remote Controller can't work normally?
A: Check if the battery is power off; or check if the Remote Controller is broken.
8. Q: Can we records whilst playing-back?
A: Yeah, you can do it. The system support you records whilst playing-back.
9. Q: Can we erase some recorded file from DVR.
A: Considering the safety factor, you can't delete the recorded file directly from the device. When you actually erase all the recorded files, please select HDD format function
10. Q: Why does the Buzzer keep sounding?
A: Please check if motion detection is on and the system has detected motion, make sure the HDD is

being detected and has sufficient space available; check if video has lost etc.

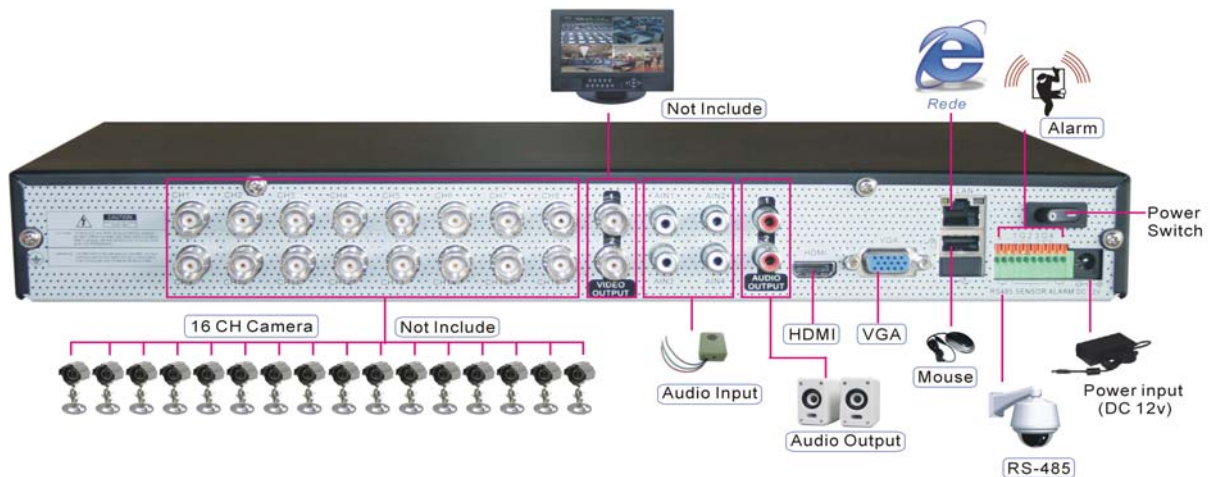
11. Q: Why can't stop [Stop] function?

A: Pressing [Stop] button only can stop manual record. If you want to stop Scheduled record, please revise to [No Record] during this period.

8.5 Usage Maintenance

1. Please make sure DVR keep away from heating source.
2. Clean the internal dust regularly, keep DVR aeration well and be easy to heat dissipate.
3. Please not plug in RS-232 and RS-485 when power is on to avoid any damage to the port.
4. Please check the HDD cable and data cable to avoid the cable aging.
5. Please avoid other electronics device interfere video/audio signal of DVR a.s.a.p., or static electricity and induced voltage damage to DVR.
6. Suggest user replace BNC cable regularly to keep signal input stable.

8.6 System Configuration



8.7 Accessory (Optional)



☐ Power cord



☐ Power Adaptor



☐ User Manual



☐ USB Mouse



☐ Remote Controller



☐ Software CD



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